

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-9. (Canceled).

10. (Currently Amended) A ~~variable capacity~~ controller of a variable capacity compressor comprising:

a pressure controlled capacity variation mechanism connected to a [[the]] solenoid actuated capacity controller, the capacity controller operable to generate ~~generating~~ a variable control pressure ~~for the mechanism~~ on the basis of an initial value of an inhalation pressure of the compressor and communicate the variable control pressure to the mechanism;

~~wherein the capacity controller includes~~ a valve seat disposed ~~located~~ between a first valve chamber portion ~~part,~~ [[part]] and a second valve chamber portion, ~~part,~~ and

a piston actuated valve closure device operable [[part]] to open or close communication between a differential pressure port connected to a control pressure receiving portion [[part]] of the mechanism and a discharge pressure port connected to a compressor discharge pressure duct [[line]]; and

a pressure responsive piston valve body loaded in ~~an opening~~ a first direction of the piston actuated valve closure [[part]] device by a spring force;

wherein the piston actuated valve closure device [[part]] includes first and second [[a]] pressure receiving portions, the first pressure receiving portion [[area]] loaded in the first direction via an inhalation pressure port in the second valve chamber portion by the inhalation pressure of an inhalation pressure duct [[line]] of the compressor, [[and]]

wherein the capacity controller includes a solenoid operable to generate for generating a thrust force to actuate ~~for actuating~~ the piston actuated valve closure device [[part]] relative to the valve seat,

wherein the discharge pressure port and the inhalation pressure port are [[being]] interconnected by a leakage passage;

wherein the piston actuated valve closure device [[part]] is disposed on a first ~~located at one~~ side of the valve seat in the first valve chamber portion in communication with part connected to the differential pressure port[[,]] and is unitarily formed at an [[one]] end of the piston valve body, with the second pressure receiving portion [[area]] loaded in a second direction towards the valve seat by the variable control pressure in the differential pressure port ~~in a closing direction towards the valve seat~~;

wherein the piston actuated valve closure device [[part]] is slidably disposed ~~provided~~ within the second valve chamber part ~~with the pressure receiving area loaded via the inhalation pressure port within the second valve chamber part by the inhalation pressure in the opening direction of the piston actuated valve closure part~~;

wherein the solenoid is operable to actuate ~~thrust acts upon~~ the piston actuated valve closure device [[part]] in the opening first direction of the piston actuated valve closure device [[part]] when the solenoid is supplied with a current, ~~the value of which determines the value of~~ a differential pressure between the variable control pressure and the inhalation pressure at the differential pressure port determined by the current; and

wherein the differential pressure port is connected to a control pressure portion

~~cylinder part~~ of a cylinder and increasing the variable control pressure at the differential pressure port operably adjusts the compressor capacity towards a maximum.

²11. (Currently Amended) A capacity controller according to claim ¹10, wherein the ~~[[fixed]]~~ differential pressure is proportional to the ~~value of the~~ current supplied to the solenoid.

³12. (Previously Presented) A capacity controller according to claim ¹10, wherein an adjustment range of pressure variations of the variable control pressure at the differential pressure port is wider than a range of pressure variations at the inhalation pressure port.

⁴13. (Currently Amended) A ~~capacity~~ controller of a compressor with variable capacity comprising:

a pressure controlled capacity variation mechanism connected to a [[the]] solenoid actuated capacity controller, the capacity controller operable to generate ~~generating~~ a variable control pressure ~~for the mechanism~~ on the basis of an initial value of an inhalation pressure of the compressor and communicate the variable control pressure to the mechanism;

~~wherein the capacity controller includes~~ a valve seat disposed ~~situated~~ between a first valve chamber portion ~~[[part]]~~ and a second valve chamber portion, ~~part and~~

a piston actuated valve closure device operable ~~[[part]]~~ to open or close communication between a differential pressure port connected to a control pressure receiving portion ~~[[part]]~~ of ~~[[said]]~~ the mechanism and ~~another~~ a discharge pressure port connected to a duct ~~[[line]]~~ of the compressor; and

a pressure responsive piston valve body loaded in a closing direction of the piston actuated valve closure device ~~[[part]]~~ by a spring force, the piston valve body having ~~[[a]]~~ first and second pressure receiving portions, ~~the first pressure receiving portion~~ ~~[[area]]~~ loaded via the

inhalation pressure of an inhalation pressure duct ~~[[line]]~~ of the compressor in an opening direction of the piston actuated valve closure device ~~[[part]]~~ relative to the valve seat;

wherein the differential pressure port and a discharge pressure duct ~~[[line]]~~ of the compressor are interconnected by a leakage passage;

wherein the piston actuated valve closure device ~~[[part]]~~ and the piston valve ~~piston~~ body are disposed ~~located~~ at a first side of the valve seat in the second valve chamber portion in communication with an part connected to the inhalation pressure port;

wherein the piston actuated valve closure device ~~[[part]]~~ is unitarily formed at an end of the valve piston body with ~~[[a]]~~ the first and second pressure receiving portions, the second pressure receiving portion ~~[[area]]~~ loaded by the variable control pressure in the differential pressure port in the opening direction relative to the valve seat;

wherein the solenoid actuated capacity controller includes a solenoid operable to actuate thrust acts upon the valve piston body in the closing direction of the piston actuated valve closure device ~~[[part]]~~ when the solenoid is supplied with a current, ~~the value of which determines the value of~~ a differential pressure between the variable control pressure and the inhalation pressure at the differential pressure port determined by the current; and

wherein the differential pressure port is connected to the ~~[[a]]~~ control pressure receiving portion ~~cylinder part~~ of a cylinder of the mechanism and increasing the variable control pressure at the differential pressure port operably adjusts the compressor capacity towards a maximum.

⁵14. (Currently Amended) A capacity controller according to claim ⁴13, wherein the ~~[[fixed]]~~ differential pressure is proportional to the ~~value of the~~ current supplied to the solenoid.

¶ 15. (Previously Presented) A capacity controller according to claim ⁴~~13~~, wherein an adjustment range of pressure variations of the variable control pressure at the differential pressure port is wider than a range of pressure variations at the inhalation pressure port.

16-17. (Canceled)

